

**KEKUATAN GESER TUMPATAN SEMEN IONOMER KACA PADA
DENTIN SETELAH APLIKASI DENTIN CONDITIONER DAN CAVITY
CONDITIONER**

**(SHEAR BOND STRENGTH GLASS IONOMER CEMENT IN DENTIN
AFTER APPLICATION DENTIN CONDITIONER AND CAVITY
CONDITIONER)**

ABSTRACT

Background: Smear layer formed during cavity preparation interfere with the adhesion between restoration and tooth structure and is considered a barrier that would degrade the quality of adhesion. Smear layer does not have a stable substrate for adhesion, gradually layer dissolves in the restorative material and cause microleakage, penetration of bacteria and inflammation of the pulp. Cavity conditioner an acid material containing 20% polyacrylic acid and 3% aluminum chloride is used to remove the smear layer and surface contamination on the dentin which can reduce the adhesion of the material and the tooth surface.. The higher the concentration, the more smear layer is dissolved in order to obtain adhesion of glass ionomer cements better. **Purpose:** The purpose of this laboratory research is to study the shear bond strength of glass ionomer cement in dentin after application dentin conditioner and cavity conditioner **Material and Method:** Twenty seven bovine cow's teeth were divided into three groups. Each group consisted of nine samples. Group 1 was control (without conditioner). Group 2 was treated with the Dentin conditioner. Group 3 was treated with the Cavity conditioner. **Result:** The average shear bond strength in group 1 is 3.31 Mpa, group 2 is 7.74 MPa and group 3 is 9.92 Mpa. **Conclusion:** There is a significant difference between third group and the shear bond strength of glass ionomer cement on dentin with application of the Cavity conditioner is higher than with application of the Dentin conditioner and without application conditioner

Keywords: Glass ionomer cement, Dentin conditioner, Cavity conditioner, shear bond strength.